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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,451	11/12/2003	Dale Wolin	10012464-4	9435

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EXAMINER	
LUK, LAWRENCE W	

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,451	WOLIN ET AL.	
	Examiner	Art Unit	
	Lawrence W. Luk	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,8-11,14,15,17-20,25-28,30,31,33,39,42 and 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-3,8-11,14,15,17-20,25-28,30,31,33,39,42* is/are allowed.

6)☒ Claim(s) *43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ng et al. (5,936,383) in view of Stryker et al. (6,472,848).

Claim 43

As to claim 43, Ng et al. disclose in figure 1, a method of exercising a battery coupled to a load, the method comprising the steps of: sensing a temperature related to the battery temperature and the temperature of the load **(see column 5, lines 44-55)**; setting a discharging current in accordance with said temperature **(see column 5, lines 37-40)**; discharging the battery at said discharging current **(see column 7, lines 20-22)**; discontinuing said discharging step when a predetermined battery voltage is reached **(see column 3, lines 22-25),** except for Ng et al. fail to teach the limitation of " **setting a charging current in accordance with said temperature, said setting step further including the step of minimizing said discharging current when said temperature is higher than a first predetermined threshold value; and charging the battery at said charging current**".

Stryker et al. disclose setting a charging current in accordance with said temperature, said setting step further including the step of minimizing said discharging

current when said temperature is higher than a first predetermined threshold value; and charging the battery at said charging current **(see abstract)**.

Ng et al. and Stryker et al. are analogous art because they are from same field of endeavor of discharging current of a battery pack.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the step of minimizing said discharging current when said temperature is higher than a first predetermined threshold value; and charging the battery at said charging current.

The suggestion/motivation for doing so would have been to provide a discharge current measuring circuit detects that the discharge current exceeds a first threshold current level, a throttle signal is sent to the system's CPU chip set. **(see column 1, lines 47-50 of Stryker et al.).**

Therefore, it would have been obvious to combine Ng et al. with Stryker et al. for minimizing said discharging current when said temperature is higher than a first predetermined threshold value to obtain the invention as specified in claim 43.

Allowable Subject Matter

3. **Claims 1-3, 8-11,14,15,17-20, 25-28,30,31,33, 39 and 42** are allowed.

Claim 1

The primary reasons for allowance of **claim 1** is the inclusion of **said temperature is higher than a first predetermined threshold value, said controller**

being operable to set said charging current to a maximum value when said temperature is lower than a second predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said second predetermined threshold value being the battery's maximum charging temperature. The prior art of record neither anticipates nor renders obvious the above recited combination.

Claims 2, 3 and 8 depends from claim 1 and therefore is allowable for at least the same reasons noted above with respect to claim 1.

Claim 9

The primary reasons for allowance of **claim 9** is the inclusion of **a memory coupled to said controller having a look up table with temperature versus discharging current and values of said variable impedance load stored therein, whereby said controller accesses said look up table to set said discharging current.** The prior art of record neither anticipates nor renders obvious the above recited combination.

Claims 10, 11, 14, 15 and 17 depends from claim 9 and therefore is allowable for at least the same reasons noted above with respect to claim 9.

Claim 18

The primary reasons for allowance of **claim 18** is the inclusion of **setting a charging current in accordance with said sensed temperature, further including the step of setting said charging current to a maximum value when said**

temperature is lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature and minimizing said charging current when said temperature is higher than a second predetermined threshold. The prior art of record neither anticipates nor renders obvious the above recited combination.

Claims 19, 20 and 25 depends from claim 18 and therefore is allowable for at least the same reasons noted above with respect to claim 18.

Claim 26

The primary reasons for allowance of **claim 26** is the inclusion of **setting a discharging current in accordance with said temperature by recalling a discharging current corresponding to said sensed temperature from a look up table; discharging the battery at said discharging current with ; discharging circuit having a variable impedance load, the impedance of said load being selected from said look up table.** The prior art of record neither anticipates nor renders obvious the above recited combination.

Claims 27, 28, 30, 31 and 33 depends from claim 26 and therefore is allowable for at least the same reasons noted above with respect to claim 26.

Claim 39

The primary reasons for allowance of **claim 39** is the inclusion of **a controller coupled to said temperature sensor and said charging circuit and operable to**

control said charging circuit in accordance with said temperature, said controller being operable to set said charging current to a maximum value when said temperature is lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current. and said first predetermined threshold value is the battery's maximum charging temperature and said controller being operable to minimize said charging current when said temperature is higher than a second predetermined threshold value.

The prior art of record neither anticipates nor renders obvious the above recited combination.

Claim 42

The primary reasons for allowance of **claim 42** is the inclusion of **setting a charging current in accordance with said sensed temperature, further including the step of setting said charging current to a maximum value when said temperature jâ lower than a first predetermined threshold value, said maximum value being the battery's maximum specified charging current, and said first predetermined threshold value is the battery's maximum charging temperature and minimizing said charging current when said temperature is higher than a second predetermined threshold value.** The prior art of record neither anticipates nor renders obvious the above recited combination.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A Sparks can be reached on (571)272-4201. The fax phone number for the organization where this application or proceeding are (703)746-7239, (571)272-2100 for regular communication and (703)746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to receptionist whose telphone number is (571)272-2100.

LWL
March 24, 2006

Lawrence Luk
examiner
3/27/06